# ENVIRONMENTAL ASSESSMENT

for the

# PLOMOSA PLACER MINE

within the

PLOMOSA MOUNTAINS
T 3 N. R 18 W, Sec. 1

QUARTZSITE, ARIZONA
LA PAZ COUNTY

DOI-BLM-AZ-320-2009-0007
for
BLM Serial No. AZA-34302

Prepared by:
Bureau of Land Management
Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365-2240

Based on Preliminary Document Prepared by:
Keith Jay
Allstate-Nevada Environmental Management, Inc.
5375 So. Cameron St., Ste. D
Las Vegas, Nevada 89118

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## 1.0 INTRODUCTION

A mining partnership, Plomosa Placers LLC submitted a preliminary Environmental Assessment on June 20, 2007, in conjunction with a Mining Plan of Operations submitted on November 15, 2006, for a proposed gold placer surface mining project on BLM managed public lands. The project site is on a 5-acre portion of a Federal unpatented mining claim in the Plomosa Mountains approximately 8 miles east of Quartzsite, La Paz County, Arizona in Township 3 North, Range 18 West, Northwest 1/4 of the Southwest¼ of Section 1, Gila and Salt River Meridian. The mining claim is located in a side-dry-wash near the head of the Italian Wash, located south of the Gold Nugget exit off Highway 10.

The Bureau of Land Management (BLM), Yuma Field Office started the review process of the preliminary Environmental Assessment in 2007 and in May of 2008, agreed to finish and finalize the Environmental Assessment.

## 1.1 BACKGROUND

The project site is in an area of previous mining exploration and activities witnessed by the presence of mine shafts and "coyote hole" tunnels in the gravel banks of a dry-wash draining from a side-wash into the Italian Wash. The Italian Wash is a major drainage feature in the Plomosa Mountains which curves easterly, then to the north, before swinging west to discharge out onto the flats near Quartzsite. Surface water typically flows in the washes during flood events associated with infrequent desert storms.

It is unknown when the previous mining activities occurred but the activity was probably not too long ago as evidenced by the use of modern era lumber, timbers, nails, and sheet metal. There is no evidence of in the BLM records of a previous mining notice or plan of operation, but no filings to mine were required by BLM prior to 1980. Also present on the site are the remains of a destroyed travel trailer on a bench above the wash, but it is not known if it was related to the past mining activities.

## 1.2 PURPOSE AND NEED FOR ACTION

The purpose and need for action on the site is for BLM to administer the proposed mining action as required by the 43 CFR 3809 surface management regulations. The proposed mining action is for the production of precious placer minerals to satisfy the national demand for such minerals. Plomosa Placers have a Federal mining claim in good standing which establishes a right to the valuable locatable minerals contained on the claim, under the authority established by the 1872 Mining Law.

## 1.3 RELATED ENVIRONMENTAL REPORTS AND OTHER RELEVANT DOCUMENTS

This Environmental Assessment (EA) is tied to the following documents.

1 Archaeological Research Services, Inc. (2007). A Class III Cultural Resources Survey of 5 Acres of U.S. Bureau of Land Management Land within the Plomosa, Placer Mining Claim, South east of Quartzite, La Paz County, Arizona.
2. Plan of Operations for Plomosa Placers. Owners/Operators Keith Jay, Doug Farley, Tom Arkoosh, Leslie Farley. Prepared by Keith Jay Allstate-Nevada Environmental Management, November 11, 2006.

3 Biological Evaluation for Plomosa Placer Mine, BLM Mining Permit (2008). Prepared by Archaeological Consulting Services, Ltd.

All the reports stated above are on file in the BLM Yuma Field Office, Yuma, Arizona.

## 1.4 LAND USE PLAN CONFORMANCE

This Environmental Assessment (EA) is tiered to the . Lower Gila South Resource Management Plan (RMP), Environmental Impact Statement (EIS), and Record of Decision, as amended, (USDOI BLM 1988. The RMP states that lands and minerals cases will continue to be evaluated on a case-by-case basis and in accordance with decisions established in the RMP (USDOI BLM 1988 page 8). The Yuma Field Office is currently in the process of an RMP revision, however, the Yuma Field Office Proposed Resource Management Plan is not legally binding until its Record of Decision is signed and approved. This revision will include the lands currently covered by the Yuma District RMP, the Lower Gila South RMP and the Lower Gila North Management Framework Plan.

In the RMP on page 12 it states, “Private industry is encouraged to explore and develop federal minerals to satisfy national and local needs. This policy provides for economically and environmentally sound exploration, extraction, and reclamation practices. Public lands are open and available for exploration and development unless withdrawn or administratively restricted. Mineral development may occur along with other resource uses. Exploration and development would continue to be managed in accordance with existing surface and mineral management regulations (43 CFR 3809).

# 2.0 PROPOSED ACTION AND ALTERNATIVES

## 2.1 PROPOSED ACTION

During the winter of 2009 Plomosa Placers proposes to mine up to 130,000 cubic yards of gravels consisting of dry wash bank materials from one Federal unpatented mining claim located near Quartzsite in La Paz County, Arizona. This material would be excavated from dry wash banks from a 5-acre area using a small ¾ yard excavator (see site map). Gravels contained in the washes would not be mined, only the bank materials.

No excavations would occur below the level of the washes. Excavated materials would be screened to remove material larger than 4 inches. Material smaller than 4 inches would feed directly into a small gravity precious metal wet processing plant consisting of a 30-foot trommel and 2 8-foot long by 12 inch wide sluice-boxes. Water would be contained within a lined pond 50 feet square and 4 feet deep, and continually recycled. Fuels needed for the equipment would be contained in 55 gallon drums which would be stored in a lined and bermed containment area.

A small 966 Cat front-end loader would be performing continuous replacement of processed gravel tailing back into the mined area as ongoing reclamation. It is estimated to take approximately 7 months to complete the planned mining operations operating at a production rate of 100 tons per hour.

A temporary occupancy would be authorized and maintained onsite in order to secure and guard the equipment during periods of non-operation, including evenings and weekends. A small travel trailer would be parked at the mining site for this purpose. The gate, trailer, and all mining equipment would be removed once the mining operations are over. All trash and human waste would also be removed.

All equipment for the processing is highly mobile and consists of a small rotating trommel screen, a wet processing shaker plant using only water, and associated conveyors. At present there is a rough poorly maintained access road to the site, which is used by the public to gain access to the general area for hunting or other recreational purposes. A temporary gate would be installed to restrict public access during periods of active mining in order to protect the public from potential hazards. Dust control would be provided on cleared areas on an as needed basis to reduce dust generation and off-site deposition of soil from the project site.

All topsoil and non-transplanted vegetation would be stockpiled along the edges of the disturbed area then respread as part of the final reclamation process. The ground would be recontoured to approximate original condition.

As part of their mining operations Plomosa Placers proposes to cleanup solid waste left on the site by unknown persons in the relatively recent past. Several “coyote hole” mine tunnels extending into the banks of the dry washes would be removed as the surrounding gravels would be completely mined.

If approved, Plomosa Placers would be required to comply with the following stipulations and mitigating measures, among others as stipulated by the Operating Plan and understandings with the Bureau of Land Management:

**1** All operators shall have archaeological sensitivity training prior to working at the material site. The project proponent shall be responsible for providing professional training by a BLM-permitted archaeological contractor that discusses applicable federal cultural resource laws and regulations, shares the importance of respecting Native American traditional values, and equips workers with the ability to identify subsurface cultural deposits during

excavation work. A card certifying that the training course has been successfully completed shall be carried by operators at all times.

**2** Any archaeological, historical, or paleontological remains discovered by the permitee, or by any person working on the permitee's behalf, shall be immediately reported to the BLM Authorized Officer. All operations in the immediate area of such discovery shall be suspended until written authorization to proceed has been obtained from the BLM.

**3** To prevent new damages to natural and cultural resources adjacent to the project area, the proponent shall install a boundary symbol every 100 feet along the mining area boundaries prior to start of operations.

**4** The operator shall erect construction fencing along the eastern side of the project area prior to start of operations, to prevent impacts to nearby sensitive resources. The fencing shall extend across the bottom of the slope to clearly mark the eastern boundary of the project area. A BLM monitor shall be present during installation of the construction fencing, and the operator shall install the fencing per BLM's instructions.

**4** All large cacti plants will be isolated by the 20 foot diameter demarcation flagging, designating the area inside the circle off limits to the mining activity or retrieved and transplanted outside the active mining area by an established cactus handling service company either outside the mining area or prepared for transportation for BLM dispensation at schools, government facilities, etc.

**5** Signs and/or appropriate fencing and gates shall prevent public hazards caused by this operation.

**6** Continuous during operations, the small mined area and temporary roads shall be contoured to match the natural contour of the surrounding terrain.

**7** If a Sonoran desert tortoise is encountered or is in harm's way, it should be reported to the BLM office in Yuma immediately. Compensation for habitat impacts would be paid to the BLM. Desert tortoises must not be handled, except by trained personnel, such as biologists authorized by FILM and AZ Game and Fish.

**8** The holder would clean off-road equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts prior to moving equipment onto public land authorized under this permit.

**9** Gravel and/or fill material to be placed in relatively weed-free areas would come from weed-free sources. The authorized officer would inspect the source for weeds and determine adequacy of site.

**10** The holder would identify a maintenance program that would include monitoring for noxious weeds. If holder identifies any noxious weeds, the

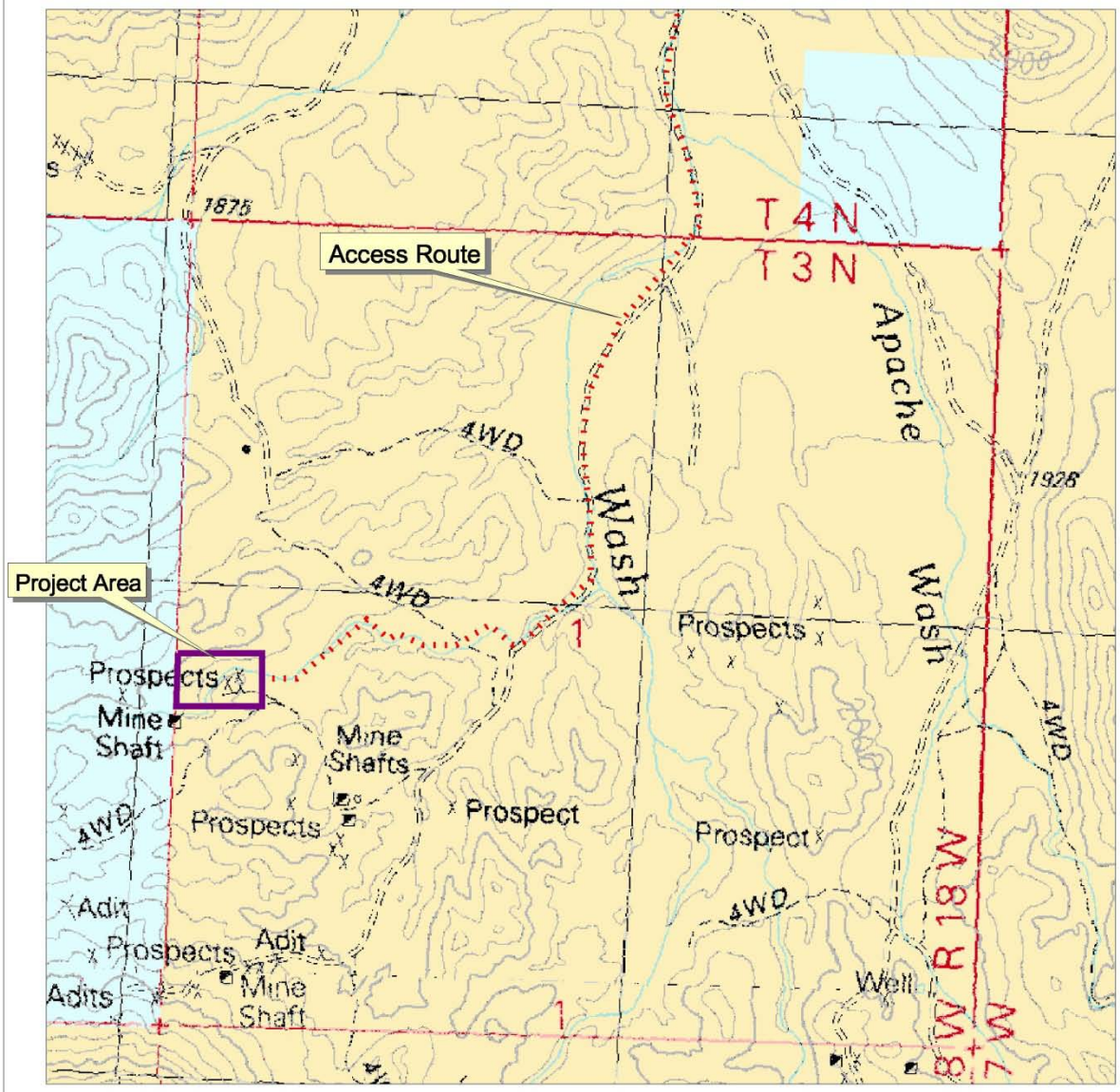
holder would notify the authorized officer immediately. A treatment program would be identified and the holder would be responsible for weed abatement.

**11** The mine operator shall have a BLM approved biologist present when the mine openings are closed to assure no bats are impacted. Should bats be identified as present a new wildlife consultation with the State Game and Fish shall be initiated before the mine openings are closed.

## 2.2 NO ACTION ALTERNATIVE

Under this alternative, the mining plan of operation submitted would be denied because of undue or unnecessary degradation to the lands. Plomosa Placers would need to modify their mining plan of operation to prevent the identified undue and unnecessary degradation to the lands.

# Proposed Plomosa Placers' Mining Project



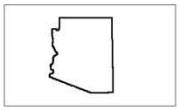

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

Map printed on November 5, 2008
Map produced by the BLM, Arizona State Office

LAND STATUS LEGEND

| | |
|---|---|
| Private | BOR |
| State | City, County,& State Park |
| BLM | State Wildlife Area |
| USFS | County Lands |
| Indian Lands | BLM National Monuments |
| Military | National Conservation Areas |
| NPS | Wilderness |
| FWS | |

LOCATION MAP



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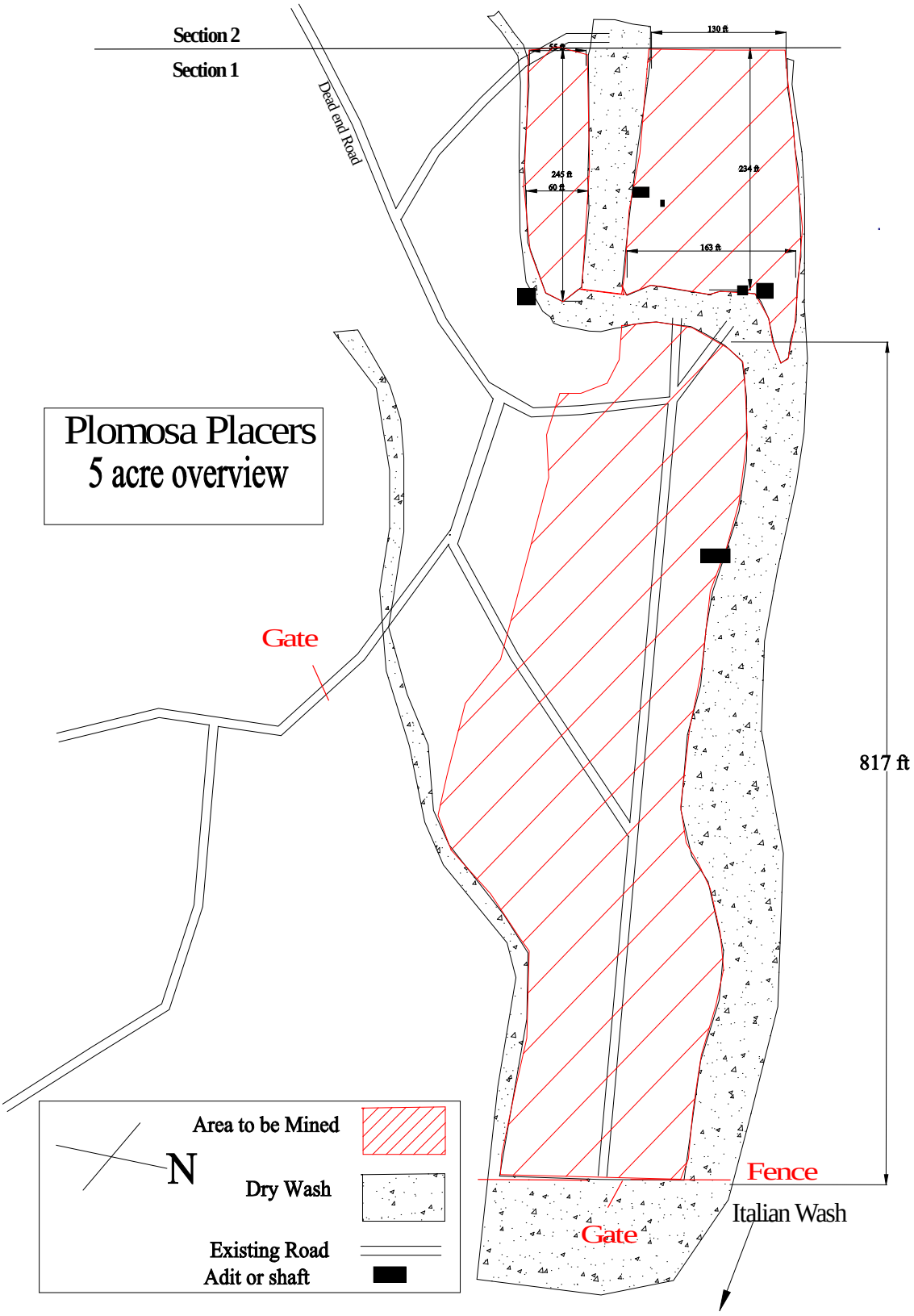
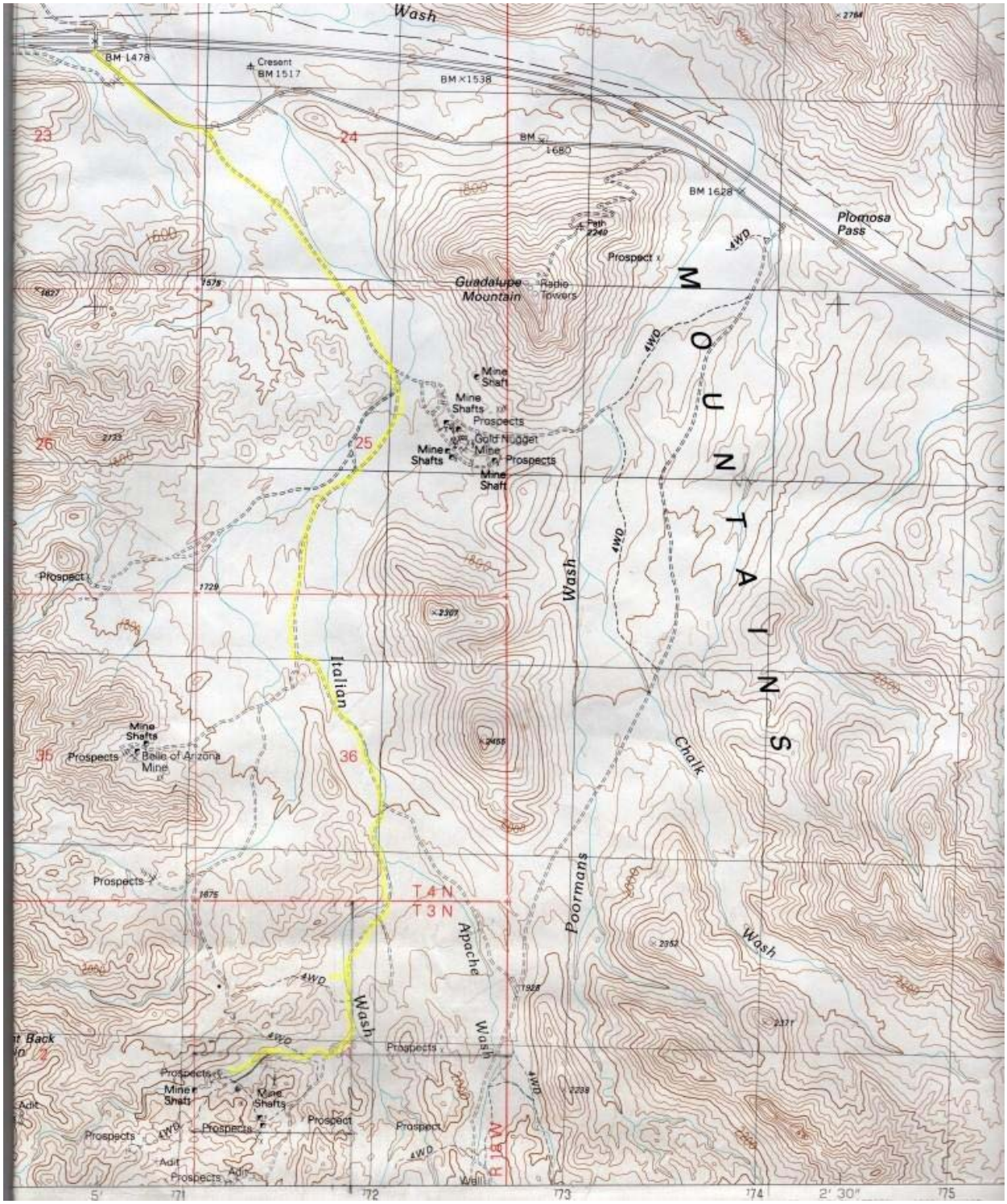



Note: Figure is not oriented North-South (see north arrow)

**PLOMOSA PLACERS ACCESS** (access route marked in yellow)



## 3.0 AFFECTED ENVIRONMENT

The following critical elements were not present or would not be affected by the proposed action and will not be addressed in this EA:

-Wetlands/riparian
-Prime or unique farmlands
-Wild and scenic rivers
-Floodplains
-Wilderness
-Socioeconomic
-Environmental Justice
-Grazing

## 3.1 GENERAL SETTING

The project area is located on lands under jurisdiction of the BLM, Yuma Field Office, within the Sonoran Desert Scrub Community, Lower Colorado River Valley subdivision (Brown, 1982) in an area consisting of valleys and mountain rock outcrops along tile northeastern front of Dos Picachos Mountain and the western edge of the Plomosa Mountains, The elevations at the site range from approximately 1.720 to 2,695 feet above mean sea level. The site is located south of Interstate 10, approximately 8 miles east of Quartzsite, Arizona. The project locations are as follows

Gila & Salt River Meridian, La Paz County Arizona

T 3 N. R 18 W, of the S1/2 of the NW1/4 of the SW I/4 of Sec. 1

The area described contains approximately 5.0 acres, located on the Gold Rock #3 mining claim (AMC 373882). The proposed mining operation adjoins lands managed by the State of Arizona.

## 3.2 CULTURAL RESOURCES

It is the statutory obligation of Federal agencies to fulfill the requirements of Section 106 of the National Historic Preservation Act, which requires Federal agencies to take into account the effects of undertakings on historic properties. In accordance with this obligation, Archaeological Research Services, Inc. (ARS) was hired to survey the proposed project area for cultural resources. ARS completed a Class I literature search and Class III 100% pedestrian survey for the five-acre Area of Potential Effects (APE).

Background research conducted for the cultural resources survey indicated no previously recorded cultural resource sites within the project area or the one-mile radius study area. No historic properties or cultural resource sites were identified during the Class III pedestrian cultural resources survey for the proposed action.

## 3.3 VISUAL RESOURCE MANAGEMENT

FLPMA identifies "scenic values" as one of the resources for which the public lands should be managed (43 U.S.C. 1702), and states that public lands will be managed in a manner which will protect the quality of the scenic values of these lands (43 U.S.C. 1701). In response to this mandate, the BLM has developed the Visual Resource Management (VRM) system. The scenic values of all public lands inventoried and classified into VRM Classes I through IV, with Class I landscapes allowing little to no impact to scenic values and Class IV landscapes allowing major impacts to scenic values. An inventory of scenic values on all public lands within the Yuma Field Office was conducted in 2005, and the entire project area was inventoried as a VRM Class III landscape. This VRM classification for the project area is unchanged from what was established in the 1988 BLM Lower Gila South RMP and Record of Decision, and the ongoing Yuma Field Office RMP revision continues to propose the project area as a VRM Class III landscape. The objective of VRM Class III landscapes is to partially retain the existing character (i.e. line, form, color, and texture) of the landscape, and the level of change to the characteristic landscape should be moderate.

The project area is located on the western edge of the Plomosa Mountains, which are a typical mountain range of the Sonoran Desert. The mountains are characterized by jagged brown peaks with green vegetation and large boulders intermittently scattered along the slopes. The mountain range's slopes normally lead down into desert washes, or arroyos, where vegetation is usually much more prolific and the stones display a greater variety in size and color. Landscape includes dendrite drainages, small plateaus with desert pavement, and rocky outcrops and their associated slopes (bajadas). The project area is located in a desert wash at the base of the mountain slopes. Because the project area is located in a wash, it is not visible by the public traveling on Interstate 10 or most of the main dirt roads within the general area. Key observation points for the project area include specific points along routes La Posa (LP) 1022 and LP1914, and are most likely to be seen by passing recreational motorists driving off-highway vehicles.

## 3.4 VEGETATION

The 5-acre project site is located in a Sonoran Desert Scrub Community, Lower Colorado River Valley, subdivision (Brown, 1982). The project area is on the western edge of the Plomosa Mountains. Landscape includes dendrite drainages, small plateaus with desert pavement, slid rocky outcrops and their associated slopes (bajadas). The ground surface of the project area is occupied by typical Lower Colorado River subdivision vegetation. Although only sparse vegetation exists on the drywash gravel banks, the plants present within the proposed site are creosotebush (*Larrea tridentata*), paloverde (*Parkinsonia microphylla*), white bursage (*Ambrosia dumosa*), ocotillo (*Fouquieria splendens*), brittlebush (*Encelia farinosa*), teddy-bear cholla (*Cylindropuntia bigelovii*), saguaro (*Carnegia gigantea*), buckhorn cholla (*Cylindropuntia acanthocarpa*), barrel cactus (*Ferocactus* spp.), and globe mallow (*Sphaeralcea* spp.). Other species occurring rarely throughout the project area include, ironwood (*Olneya tesota*), and wolfberry

(*Lycium* spp.).A biological evaluation of the area was completed by Archaeological Research Services, Ltd. in May 2008.

## 3.5 WILDLIFE

Wildlife within the project area is typical *of* the Lower Colorado River Valley subdivision. Animals observed or known to occur in the area include: desert bighorn sheep *(Orvis canadensis nelsoni),* mule deer *(Odocoileus hemionus crooki),* coyote *(Canis latrans),* ring-tailed cat *(Bassariscus astutus),* several lizard and snake species, and typical desert bird fauna.

One of the "coyote hole" mine tunnels exhibited some evidence of transitory bat use as evidence by small quantities of bat droppings on the wall of the tunnel.

## 3.6 SPECIAL STATUS SPECIES

The US Fish and Wildlife Service (USFWS) threatened and endangered species list for La Paz County was reviewed by a qualified biologist with Archaeological Consulting Services, Ltd. (ACS) to determine species potentially occurring in the project vicinity (ACS, 2008). No threatened or endangered species were found to occur in the project vicinity. In addition, the BLM list of sensitive species and the Arizona Game and Fish Department (AGFD) list of special status species were similarly reviewed. The following BLM and/or AGFD special status species have the potential to occur within the project area: California leaf-nosed bat (*Macrotus californicus*), Cave myotis (*Myotis velifer*), Pocketed free-tailed bat (*Nyctinomops femorosaccus*), and Sonoran desert tortoise (*Gopherus agassizii*).

### California leaf-nosed bat (*Macrotus californicus*)

The California leaf-nosed bat occurs in desert scrub areas of California, southern Nevada, Arizona, Baja California and Sonora, Mexico. Within Arizona, the species is a year-round resident and occurs south of the Mogollon Rim and in western portions of Mohave County, primarily at elevations below 2,500 ft. California leaf-nosed bats feed primarily on moths and other insects located by sight. Foraging occurs an hour or two after sunset, and again shortly before sunrise. The species does not hibernate; therefore, foraging occurs year-round. California leaf-nosed bats roost primarily in warm mines and caves with temperatures above 28°C. Preferred roost sites are characterized by large ceilings and open spaces for flight. The species is listed as a Wildlife of Special Concern in Arizona.

ACS personnel surveyed all the mine adits within the project limits on 22 February 2008. Although no bats were observed during this survey, evidence of bat use (small piles of guano and scattered wall stains) was detected in Adit 5. Adit 5 is the most potentially suitable roost location for California leaf-nosed bats. The adit is suitably long with high ceilings, has a warm temperature regime. In addition, Keith Jay with Allstate-Nevada took a blurry photograph of a bat within Adit 5. Based on the ear size, the bat appeared to be either a California leaf-nosed or a Townsend's big-eared

bat. Finally, the guano deposits within Adit 5 appear consistent with those from California leaf-nosed bats, as they were found on the edges of the adit near the walls, not under the middle of the ceiling, although this does not entirely rule out other species.

**Cave myotis (*Myotis velifer*)**

The cave myotis is one of 9 Myotis species occurring in Arizona. In Arizona, this species occupies desertscrub habitats in the southern half of the state at elevations ranging from 300 to 5,800 ft. This species hibernates over the winter months in wet mine shafts in extreme southern Arizona where roost temperatures range from 8 to 11°C. Summer roosts are primarily crevices and recesses of caves, as well as mine shafts and other man-made structures. The cave myotis is listed as a sensitive species by the Bureau of Land Management.

ACS personnel surveyed all the mine adits within the project limits on 22 February 2008. Although no bats were observed during this survey, evidence of bat use (small piles of guano and scattered wall stains) was detected in Adit 5. Suitable habitat, particularly summer roosting habitat, for cave myotis occurs within the project limits.

**Pocketed free-tailed bat (*Nyctinomops femorosaccus*)**

The pocketed free-tailed bat occurs throughout southern and central Arizona. Pocketed free-tailed bats use roost sites located in crevices in rocky cliffs and slopes in desertscrub through pine-oak habitats; man-made structures are sometimes also used as roost sites. The species forms maternity colonies, with young being born in June and July. The species is insectivorous, feeding primarily on moths shortly after dusk and before dawn. The pocketed free-tailed bat is listed as a sensitive species by the Bureau of Land Management.

ACS personnel surveyed all the mine adits within the project limits on 22 February 2008. Although no bats were observed during this survey, evidence of bat use (small piles of guano and scattered wall stains) was detected in Adit 5. Potential habitat for pocketed freetailed bats occurs within the project limits. Although this species roosts predominantly in rock crevices, some man-made structures such as mine adits may also be use.

**Sonoran desert tortoise (*Gopherus agassizii*)**

Sonoran desert tortoises are found predominantly on rocky slopes and in bajadas within the Sonoran desertscrub biotic community, particularly in caliche cut banks of washes (AGFD 2001b). Sonoran desert tortoises are known to occur throughout the rocky canyons and hillsides within the Plomosa Mountains. The majority of habitat within the project area is suitable for desert tortoises. Large boulders and rocky slopes which may provide suitable shelter for burrow sites are common throughout the majority of the project area. The project area is located with Category 2 desert tortoise habitat. Category 2 habitat has medium to high density of tortoises, stabile or

decreasing populations, most conflicts are resolvable, and may be essential to the maintenance of viable populations.

Survey history is not available for this species. Species occurrence data is taken primarily from the AGFD Heritage Database Management System (HDMS). No tortoises or tortoise sign were observed during the field visit to the site. The species is listed as a Wildlife of Special Concern in Arizona.

### 3.7 SOILS/MINERALS

The site is located in a mountainous area with regolith soil, which is weathered from rock outcrops of marble and granite. Using Arizona Soils from University of Arizona Press, the area is part of the Cherioni Group. This soil type is described as being shallow to very shallow light-colored gravelly very fine sandy loam surface lavers, and gravelly and very gravelly fine sandy loam and very fine sandy loam sub surface layers. The area soils are well drained and can be alkaline and calcareous throughout, with only slight possibility, of erosion.

The gold placer minerals that would be mined are contained within the lightly cemented sands and gravels contained in the alluvial banks of the dry washes.

### 3.8 AIR QUALITY

The Air Quality Group of the Arizona Department of Environmental Quality (ADEQ) was contacted by Mr. Keith Jay for the site. The air quality in the area of the site is affected mostly by the desert climate. Dust storms are prevalent during monsoon season in the Sonoran Desert environment.

### 3.9 HAZARDOUS MATERIALS

No hazardous materials can currently be observed on the site. Some solid waste from an old occupancy and past mining is present.

### 3.10 INVASIVE, NON-NATIVE SPECIES

No invasive or non-native species were observed during the field survey.

### 3.11 RECREATION

Between November and March of each year, the Town of Quartzsite and the surrounding public lands is a national destination for recreational vehicle camping. Due to the project area's proximity to Quartzsite, high amounts of recreational off-highway vehicle travel occurs on the unpaved routes and dry desert washes leading to and around the project site. The project area includes two routes currently available for recreational off-highway vehicle use, LP1022 and LP1914. While route LP1022 provides access to a parcel of Arizona State Trust Land located west of the project area, both of these routes dead end and neither route provide recreational connectivity to other routes on public lands. Besides off-highway use, public land

visitors coming from the Quartzsite area also commonly hike, camp, view wildlife, geo-cache, and rockhound within or near the project area. Hunting big game, such as mule deer, is also a viable recreation opportunity within or near the project area. However, the project area's proximity to Interstate 10 and the higher quality wildlife habitat found in the nearby New Water and Plomosa Mountains reduce the likelihood that the project area is a critical hunting destination.

### 3.12 HAZARDS TO THE PUBLIC

Currently there are hazards to the public on the site due to the presence of several unsupported mine short mine adits. Because of the lack of any timbers or other roof support infrastructure there is a possibility of the roof coming down onto a member of the public, particularly if someone was prospecting and digging gravels from within one of the adits.

There are potentially hazardous unsecured mine shafts in the area including on state lands immediately up the wash from the proposed mine site, but none are in the proposed action project area.

### 3.13 NATIVE AMERICAN RELIGIOUS CONCERNS

The BLM initiated consultation with 15 Native American tribes and groups through a letter dated September 2, 2008. Additional coordination occurred through written correspondence, phone calls, and meetings. On December 9, 2008, the BLM and representatives from the Quechan Tribe's Cultural Committee went on a fieldtrip to the project area. During that fieldtrip, tribal representatives showed BLM some cultural resources immediately adjacent to the proposed project area, and they requested that those resources be protected during operations. Tribal representatives from several tribes also shared concerns about damages to the desert landscape caused by operations under the 1872 mining law, and asked that the BLM minimize those potential impacts.

### 3.14 WATER QUALITY

There is currently nothing at the site to affect water quality except natural siltration and bed-load contained in flowing surface water during the occasional violent desert storm events. There are no known wells in the area from which drinking water is obtained and no know impacts to drinking water from past mining activities.

## 4.0 ENVIRONMENTAL IMPACTS

### 4.1 CULTURAL RESOURCES

No impacts to historic properties or cultural resource sites would occur from the proposed action, since none are located in the project area.

## 4.2 VISUAL RESOURCE MANAGEMENT

The proposed project would comply with the objectives for VRM Class III landscapes. Implementing the proposed action would cause changes to the basic form, lines, texture, and colors of the five-acre project area. Proposed mining activities would be limited to the five-acre area within the desert wash, and would not impact any of the surrounding mountain peaks that are visible from passing motorists on Interstate 10 or campers in the BLM La Posa Long-Term Visitor Area south of Quartzsite. The mining operations would be visible by recreational off-highway vehicle riders on routes LP1022 and LP1914. However, the proposed installation of gates to block access into the project area would prevent the recreating public from seeing any of the proposed disturbances. Stipulations requiring the continuous recontouring of the 5-acre project area during the mining operations would ensure that a minimal amount of visual impacts occur within the project area. In addition, the intermittent flow of water within the desert wash during rain events would also aid in returning the project area to natural conditions. Therefore, implementation of the proposed action alternative would cause some changes in existing visual setting of landscape, but these changes would not be overwhelming to the casual observer.

## 4.3 VEGETATION

The existing landscape is made up of approximately 90% bare ground while the remaining 10% is occupied by typical Lower Colorado River subdivision vegetation. The vegetation present would be disturbed in most of the 5-acre project area. The very small number of saguaro cacti present would be demarcated by a 20 foot diameter prohibited zone, transplanted to an area outside the project or removed for dispensation by the BLM for locations of their choice. Plomosa Placers proposes to remove and transplant approximately thirty saguaro, eight ocotillo, and three barrel cacti. The transplanting of these cacti would be carried out by a professional contractor.

## 4.4 WILDLIFE

Wildlife within and surrounding the proposed project area would be temporarily displaced by noise and human activity during the proposed activities over the course of approximately 7 months. Wildlife habitat within the proposed project area would be disturbed following recontouring until the site rehabilitates naturally. Wildlife may be harmed from mining equipment within the 5-acre proposed area, and habitat (including feeding areas. nesting, and territorial areas) would be changed during mining activities. Wildlife would be anticipated to return to the project areas following natural rehabilitation of the site.

Some loss of temporary transit bat habitat would occur as several small “coyote hole” mine tunnels would be mined through and destroyed. However, other larger underground mine workings exist in the area for the bats to use so the effects would be negligible.

## 4.5 SPECIAL STATUS SPECIES

As there are no federally listed threatened or endangered species that occur within or near the project site, no impact to federally listed species would occur from the proposed project. The project may impact habitat of a total of 4 species associated with BLM. FWS, or State lists. Impacts to these species are described below:

1. California leaf-nosed bat (*Macrotus californicus*)
   Impacts from the project could include individual mortality by heavy equipment at the site and long-term habitat disturbance. Compliance with special stipulations for bats would help lessen the likelihood of direct impacts. This project may impact California leaf-nosed bat individuals, but is not likely to result in a trend toward federal listing or loss of viability.

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2. Cave myotis (*Myotis velifer*)
   Impacts from the project could include individual mortality by heavy equipment at the site and long-term habitat disturbance. Compliance with special stipulations for bats would help lessen the likelihood of direct impacts. This project may impact cave myotis individuals, but is not likely to result in a trend toward federal listing or loss of viability.

3. Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
   Impacts from the project could include individual mortality by heavy equipment at the site and long-term habitat disturbance. Compliance with special stipulations for bats would help lessen the likelihood of direct impacts. This project may impact California leaf-nosed bat individuals, but is not likely to result in a trend toward federal listing or loss of viability.

4. Sonoran desert tortoise (Gopherus agassizii)

Impacts from the project could include individual mortality by heavy equipment and vehicles at the site and long-term habitat disturbance. Compliance with special stipulations for desert tortoise would help lessen the likelihood of direct impacts. The project proponent would pay compensation to mitigate the impacts of long-term disturbance of Category 2 habitat. This project may impact Sonoran desert tortoise individuals, but is not likely to result in a trend toward federal listing or loss of viability.

## 4.6 SOILS/MINERALS

Construction and operation of the proposed project could result in the disturbance and alteration of 5 acres. Minor impacts to native soil and minerals would result from the clearing of sparse protective vegetation and excavation of materials.

Contouring would be done within the active site on a continual schedule to reduce erosion from rain and runoff from adjacent non-mined areas. There would be some

additional loss of soils due to erosion within the mined area. The processing of the lightly cemented sands and gravels would result in a slight increase in erosion potential during flood events as the dry wash banks would become looser and less consolidated after being mined. The premined nearly vertical banks would be at an approximate 45 degree angle after recontouring was completed.

Re-contouring of the project site necessary and desired during the mining activities would reduce impacts to soils over the long term.

## 4.7 AIR QUALITY

The proposed action for this mining activity is to remove, recovery precious metals, and continuously reclaim the dry wash gravel banks which would produce dust and minor amounts of engine exhaust from the operation of heavy equipment. The site is accessed by a primitive BLM dirt road the use of which would also produce intermittent dust. As mitigation roads used during the operation would periodically be watered for dust control.

The work in the active mine area would consist of removing dry wash bank gravels, processing by a gravity shaker plant by wet methods using only water, and replacing the gravels to the original location continuously as reclamation to generally natural contours. ADEQ does not require a permit for the actions proposed for this project. Processing and replacement as reclamation would be done with one small backhoe and small loader. Dust associated with these activities would be intermittent and minimal since it utilizes a wet process and a small production rate is employed.

## 4.8 HAZARDOUS MATERIALS

Operations would require the use fuels and of small amounts of other hazardous materials such as oil, grease, and anti-freeze. However, the Plomosa Placer Mine and their representatives would follow all the proscribed stipulations and best management practice procedures during operations to minimize the potential for a spill. They have proposed to remove all empty oil containers and other refuge on a daily basis. All remaining materials would be removed following completion of operations, and if any spills do occur, all HAZMAT regulations proscribed by the Arizona Department of Environmental Quality would be followed.

## 4.9 INVASIVE, NON-NATIVE SPECIES

Invasive or non-native species may be introduced into the area as a result of the proposed activities. Compliance with special stipulations to prevent invasive or non-native species introduction and remove them if they do become established would help mitigate these impacts.

## 4.10 RECREATION

Recreation opportunities are likely to be minimally impacted from implementing the Proposed Action Alternative. This is due to the fact that public land visitors and the mining company would be using the same access routes and that the five-acre project

area itself has the potential to provide a variety of dispersed recreation opportunities. However, these impacts are expected to be minimal since alternative routes are present for the public's use and the vast acreages (i.e. over 380,000 acres) of surrounding public lands where the same type of dispersed recreation opportunities are also available. Recreational access along routes LP1022 and LP1914 would be blocked from implementing the proposed action. This would block public access to the adjacent parcel of Arizona State Trust Land to the west. However, this loss of public access is expected to cause minimal impacts to the recreating public due to the facts that both routes dead end and do not provide connectivity to other recreational routes, access to the adjacent Arizona State Trust Land is also provided via route LP1030 located approximately 500 meters south of the project area, and there are over 1,800 miles of routes currently available for recreational travel in the vicinity of Quartzsite.

## 4.11 HAZARDS TO PUBLIC

The potential hazards to the public presented by the "coyote hole" mine adits would be removed as they would be closed and destroyed by the proposed action. Some hazards would temporarily be created by the use of heavy equipment on the site and the creation of unmarked fairly deep trenches. This hazard would be mitigated by temporary gates and signs warning the public of active mining operations.

## 4.13 NATIVE AMERICAN RELIGIOUS CONCERNS

A stipulation has been added to the proposed action requiring the operator to erect construction fencing along the eastern side of the project area during operations, in order to prevent impacts to nearby resources with traditional importance. Other stipulations for the proposed action would minimize impacts to the environment and desert landscape (see Section 2.1 Proposed Action).

## 4.15 WATER QUALITY

Because of the removal of vegetation there would be temporary impacts to water quality through increased point source erosion from flowing surface water during storm events. This would result in increased siltration into the wash. This would decrease over time as vegetation became reestablished and the gravels settle and become more compacted.

## 5.0 IMPACTS FROM THE NO ACTION ALTERNATIVE

Implementation of the No Action Alternative would result in no operations to recover precious metal from the project site, and no additional disturbances would occur. Therefore, no impacts to visual resources, vegetation, wildlife, including special status species, soils, air quality, invasive non-native species, recreation, and water quality from implementation of the proposed action would occur.

## 6.0 CUMULATIVE IMPACTS

Cumulative impacts include the impacts on the environment that result from the incremental impacts of the proposed action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over time. Cumulative impacts for this project are being analyzed within the Italian Wash drainage system which extends approximately along the access route, crosses Highway 10 before swinging west to empty out near the community of Quartzsite.

The proposed action would result in the extraction of precious metals from approximately 130,000 cubic yards of gravel bank materials over the 5 acre project site. The proposed action would add 5 acres cumulatively to the previous mining related surface disturbance in the Plomosa Mountains area, which includes numerous past small scale lode and placer mining operations. Two of the larger past mining operations within the same drainage included the Apache Chief Mine and the Gold Nugget Mine. Most of the past mining ceased over 50 years ago, and the areas of past disturbance have largely reclaimed themselves. However, a number of old mining related structures and roads still remain, as well as numerous abandoned mine shafts and adits. The proposed action would not produce any additional roads, permanent structures, mine shafts or adits.

The Plomosa Mountains area is currently being mined for mineral materials several miles to the north, but the proposed action is in a different drainage system and would not add significant cumulative impacts to this existing condition. The BLM has recently designated a mineral material community pit within the Italian Wash drainage on the other side of Highway 10, but BLM currently has no applications to quarry material from that site. Future disturbance up of up to 20 acres can be reasonably foreseen, but as the site is located nearly 10 miles down the wash from the proposed action no significant cumulative impacts are expected.

New disturbance would add insignificant short term cumulative impacts to noise and localized air quality in the project vicinity including dust and engine exhausts, and longer-term but insignificant impacts on soils, vegetation, wildlife, and visual resources. There would be an insignificant cumulative impact to local bat populations due to the loss of several small “coyote hole” tunnels. Additionally, the first few storm events producing surface water flow would be likely to result in decreased water quality and increased siltation downstream in the Italian Wash. This is not expected to be significant because the high natural sediment load carried in flood waters produced by these storm events would be much greater than any additional sediment introduced by the proposed action.

If the mining operation is economically successful the claimants have stated that further placer mining would be proposed resulting in an increased area of disturbance. In particular the claimants are interested in mining on adjoining state lands up the same dry washes to the west of the currently proposed site.

**Table I Summary of Comparison of Environmental Impacts for Alternatives**

| Affected Resources | Alternative I | Alternative 2 |
|---|---|---|
| | **No Action Alternative** | **Proposed Action Alternative** |
| Access/Recreation | No change in current status. | Minor loss of dispersed recreational opportunities and public access. |
| Noise | No change in current status. | Minor impacts- mining operations would be heard in the immediate vicinity, however, mining equipment would not exceed ADEQ regulations for noise and for abatement criteria. |
| Air Quality | No change in airborne dust from road and seasonal blasting. | Airborne dust would increase slightly over the length of the project life due to mobile equipment activities and road use. |
| Visual Resources | No change in current status within the site. | Minor changes to the five-acre site's form, line, texture, and color are anticipated. Reclamation requirements and the natural flow of water within the wash would minimize these impacts over time. |
| Surface Water | No change in current status. | Temporary impacts to the water quality would occur during storm events. |
| Vegetation | No change in vegetation. | Vegetation within the 5-acre Site would be removed and most cacti transplanted to other locations. |
| Wildlife/Wildlife Habitat | No change in current status. | Minor changes would occur due to habitat disturbance of site. |
| Threatened, Endangered, and Sensitive Species | No change in current status. | No change in current status to T & E Species, but special status species may be impacted. |
| Cultural Resources | No change in current status. | No known impacts but possible impact to isolated buried cultural materials. |
| Socioeconomic Resources | No change in current conditions and trends. | No change in current conditions and trends. |
| Environmental Justice | No change in current status. | No change in current status. |
| Native American Religious Concerns | No change in current status. | Stipulations added to mitigate concerns. |

## AGENCIES CONSULTED FOR THIS ENVIRONMENTAL ASSESSMENT

Arizona Game and Fish Department
Arizona Department of Environmental Quality
Air Quality Group
Water Quality Division

Native American Tribes
- Ak-Chin Indian Community
- Chemehuevi Indian Tribe
- Cocopah Indian Tribe
- Colorado River Indian Tribes
- Fort Mojave Indian Tribe
- Fort Yuma Quechan Tribe
- Gila River Indian Community
- Hia-Ced O'odham
- The Hopi Tribe
- Hualapai Tribe
- Pueblo of Zuni
- Salt River Pima-Maricopa Indian Community
- Tohono O'odham Tribal Nation
- Yavapai-Apache Nation
- Yavapai-Prescott Indian Tribe

## 8.0 LIST OF PREPARERS

US Bureau of Land Management-Yuma Arizona Office
- Carl Persson, BLM, Geologist/Minerals and Lead Author
- Sandra Arnold, BLM, Archeologist/Cultural Specialist
- Jeff Young, BLM, Biologist/Wildlife Specialist
- Karen Reichhardt, BLM, Vegetation Specialist
- Arturo Lopez, BLM, Lands and Reality Specialist
- Aaron Curtis, BLM, Recreation and Visual Resources Specialist
- Steve Fusilier, Hazardous Materials Specialist

Allstate-Nevada Environmental Management, Inc.
- Keith Jay Owner Operator and Mining Partnership Member

## REFERENCES

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